

SAMBODHI



Microsoft



Cassandra Training Course

Project Based Immersive Learning Course

Cassandra Training Course Overview

Sambodhi and Education Nest provide an Apache Cassandra Certificate Course that aims to equip professionals with the necessary skills to become a certified Apache Cassandra developer. The course covers all the essential aspects of Apache Cassandra, such as architecture, features, data model, and administration. The program is designed by experts based on the industry's requirements and demands, ensuring that participants are well-prepared for the job market. Participants will have the opportunity to work on two real-time projects during the training, gaining practical skills and hands-on experience. Upon completion of this course, participants will be able to install, configure, and monitor Cassandra and integrate it with other Apache frameworks. On successful completion of the course, you will receive a Course Completion Certificate from Education Nest.

Benefits of Cassandra Training Course:

Enrolling in the Apache Cassandra Certificate Training offered by Sambodhi and Education Nest provides numerous benefits to professionals who are looking to advance their careers in the field of database management. The course is designed by professionals as per industry requirements and demands, allowing learners to master the key concepts of Apache Cassandra. During the course,

participants will learn to install, configure, and monitor Cassandra, as well as integrate it with other Apache frameworks like Hadoop, Spark, and Kafka. The course offers many job opportunities for Cassandra developers all over the world, as top companies are actively recruiting professionals with these skills.

Who should learn?

The Cassandra course is suitable for a wide range of individuals, including:

- IT Developers and Testing professionals
- Big Data Developer / Administrator / Architect / Analyst / Engineer
- Software Architect / Engineer/Developer
- Project Managers , Research and Analytics professionals
- Professionals looking for a career in NoSQL and Cassandra
- Solution Delivery Consultant
- Senior BI / ETL Developer
- NoSQL Big Data Developer

Why do you need Cassandra Training Course?

Average Salary Growth:

The average salary of a Cassandra Developer varies depending on factors such as location, company size, and years of experience. According to Payscale, in the United States, the average salary for a Cassandra Developer is around \$99,000 per year. However, experienced professionals with more than 5 years of experience can earn up to \$130,000 per year. In India, the average salary for a Cassandra Developer is around 7,50,000 INR per year, while experienced professionals can earn up to 20,00,000 INR per year.

Industries:

Cassandra Developers are in high demand across various industries and multinational corporations. Some of the industries where Cassandra skills are in demand include finance, healthcare, e-commerce, social media, and telecommunications. Major companies such as Apple, Netflix, eBay, and Twitter use Cassandra, and there are numerous job opportunities available for skilled professionals. With the growing demand for big data solutions and the increasing popularity of NoSQL databases, the demand for Cassandra Developers is expected to continue to rise in the coming years.

Position in Market:

The job market for Cassandra developers is expected to grow steadily with the increasing demand for Big Data and real-time analytics. A report by Allied Market Research suggests that the global NoSQL market, including Cassandra, is estimated to reach \$22 billion by 2026, indicating a positive growth trend. This projected growth showcases a significant demand for Cassandra developers, which is expected to create ample job opportunities in the coming years.

Designations:

- Cassandra Developer
- Cassandra Administrator
- Big Data Developer
- Big Data Architect
- Data Engineer

Why Cassandra Training Course from Education Nest

- **Free Demo on Request**
- **Live Interactive Learning**
- **Lifetime Access**
- **Flexible Schedules**
- **24x7 Support**
- **One on One Doubt Clearing**
- **Real Time Project-Based Learning**
- **Certificate Oriented Curriculum**

Key Skills Covered:

- Architecture
- Data Model
- Installation
- Cqlsh, Shell Commands
- CURD Operations
- CQL Types
- CQL Collections
- Keyspace Operations
- Table Operations

Cassandra Training Course Syllabus

Module 1: Introduction to Big Data

- Feature and benefit of Big data and Problems caused by it
- 5V - Velocity, Variety, Veracity, Volume and Value

- Characteristics of big data
- Big data Architecture
- Traditional Database Management System
- Limitation of RDMS
- Distributed Computing
- Overview of Stream and Batch processing

Module 2: Introduction to Cassandra

- Understanding NoSQL
- Types of NoSQL databases
- What is wrong in Relational database
- NoSQL Ecosystem
- History of Cassandra
- Feature of Cassandra
- High availability
- Replication and Multiple data centers

Module 3: Cassandra Architecture

- Understanding high level Cassandra architecture
- Peer-to-Peer design
- Network topology
- Virtual Node
- Components of Cassandra
- Partitioner and Replication
- Memtables and SSTables
- Bloom Filters
- Managers and Services
- Cassandra read and write process
- Failure scenario

Module 4: Installation and Configuration

- Overview of Cassandra version history
- Pre-requisite for Installation
- Installing Cassandra from binary
- Verify and running Cassandra
- Command-line client Interface
- CLI Commands
- Logging setup in Cassandra
- Replication Factor
- Create and setup Cluster
- Miscellaneous setting

Module 5: Cassandra Data Model

- Introduction to Data Model
- Data Types and Dynamic Columns
- Amend Data types
- Counter Column
- Cassandra DDL and DML process
- Composite Keys
- Collection Columns in Cassandra
- Table Operations and CURD on Cassandra
- Understand the analogy between RDBMS and Cassandra Data Model
- Best Practice on Data Model

Module 6: Indexes and Composite

- Overview of Index and benefit
- Index on Distributed Database
- Clustered Indexes vs Non-Clustered Indexes
- Secondary Index

- Composite Columns
- Data Partitioning
- Data Colocation

Module 7: Working with MapReduce

- Overview of MapReduce
- Batch Processing
- MapReduce Integration with Cassandra
- Thrift way
- Stream Analytics

Module 8: Cassandra Query Language (CQL)

- Introduction to CQL
- Syntax on CQL
- Database User and Roles
- Control Commands
- Data Definition Language(DDL)
- Data Manipulation Language(DML)
- Complex query
- Built-in and User defined Function
- Run CQL Scripts from the command line
- JSON support

Module 9: Cassandra Interfaces

- Java interfaces to connect Cassandra
- ODBC interface to connect Cassandra

Module 10: Data Migration

- Understanding Data Migration and Analytics

- Understanding Pig
- Pig with Cassandra
- Apache Hive
- Understanding UDF
- Hive with Cassandra
- Data Migration from any Database to Cassandra

Module 11: Performance Tuning and Monitoring

- Understanding Performance Indicators
- CPU and Memory resource utilization
- Understand Logical and Physical Reads
- JVM Setting
- Concurrency
- Configuration for Data Cache
- Off-Heap Vs On-Heap
- Stress Testing for Cassandra
- Overview of Monitoring
- Cassandra Monitoring Tools
- Logging
- Cassandra MBeans
- Health Check

Career Support

Profile Building:

At Sambodhi and Education Nest, we provide the services of experienced professionals who can offer personalized assistance in crafting your CV and online profiles. They take into account your unique educational and experiential background, ensuring that your job application stands out from the rest.

Interview Preparation:

The upcoming interview preparation service will include personalized one-on-one sessions and the option for mock interviews if needed.

Job Referrals:

At Education Nest, we receive a variety of job requirements from diverse sources such as organizations, our clients, HR consultants, and a vast network of Education Nest currently employed in different companies. We strive to meet these varied requirements to the best of our abilities.

Continuous Support:

At Sambodhi and Education Nest, we provide ongoing support to our learners for as long as they need it. Many of our learners have received multiple job offers and promising employment opportunities as a result of the skills they acquire during our program.